

# Greenlighting Program

## Fact Sheet



### NRO Mission

The National Reconnaissance Office (NRO), an Intelligence Community element and Department of Defense organization, is responsible for developing, acquiring, launching, and operating America's reconnaissance satellites, as well as operating associated data processing facilities that collect intelligence information in support of national security.

### Greenlighting Overview

The NRO is committed to partnering with commercial industry to ensure the agency gains the latest technology innovations commercial industry has to offer. Created in fall 2017 by NRO's Advanced Systems and Technology Directorate (AS&T), the Greenlighting program streamlines the evaluation of the performance and space survivability of emerging technologies developed by commercial partners.

This unclassified program focuses on technology development by providing NRO's partners with options for on-orbit experimentation through a rigid interface that allocates size and power resources to several independent payload slots. These slots are interchangeable to maximize schedule flexibility, reducing the risk associated with synchronizing satellite and payload delivery timelines. Ultimately, the Greenlighting program enables vendors to focus on technology maturation—not the logistics of getting to space.

### Benefits

Greenlighting leverages circuit board interfaces to host small module technology experiments, promoting the miniaturization of technology and keeping costs low. Furthermore, this efficient use of experiment space gives small module-sized projects access to space testing that might not be available through traditional means. Additional benefits of Greenlighting include:

- Decoupling payload/experiment readiness from bus/launch schedule;
- Enabling developers to focus on maturing, iterating, and testing new technologies in space without the need to buy, build or operate their own spacecraft;
- Maximizing the number of meaningful experiments that can be hosted each launch; and
- Providing data feedback for both short-term and long-duration, on-orbit testing.

### Program Details

The Greenlighting program maintains two Interface Control Documents (ICD)—the Side Wall Mounted Module (SMM) and the Printed Circuit Board (PCB). The SMM provides greater volume for experiments compared to the PCB format and allows for access to test in an external space environment. However, the PCB format offers increased flight opportunities for multiple vendors due to a higher number of available slots. Both types of experiments must be government-championed and have technical merit to launch. Experiments are manifested on a first-in-first-out basis to level the playing field of technology development. Overall, Greenlighting experiments receive vital on-orbit testing and evaluation while developers receive key data feedback to mature their technologies for future applications.

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